



PATENT  
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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

**Frédéric LEGRAND**

Application No.: 10/617,676

Filed: July 14, 2003

For: ANHYDROUS PASTE FOR  
BLEACHING HUMAN KERATIN  
FIBERS

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) Group Art Unit: 1615  
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) Examiner: Hasan S. AHMED  
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) Confirmation No.: 4116  
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Sir:

**DECLARATION UNDER 37 C.F.R. § 1.132**

I, Florence Laurent, do hereby make the following declaration:

1. I am a French citizen, residing at 25 bis, rue C.Chefson - 92270 Bois-Colombes – France .
2. I have been awarded a degree in chemistry from engineer school ESCOM.
3. I have been employed by L'ORÉAL since 1984 and I am presently in Haircolor and Bleach department.
4. During my employment at L'ORÉAL, I have been engaged in research and development regarding cosmetic products.
5. Given my education and experience, particularly in the area of haircolor and bleach products , I consider myself able to provide the following testimony based on experiments conducted by me or under my supervision.

## COMPARATIVE EXPERIMENTS

### Series 1

#### A. Preparation of the Compositions

6. The following bleaching pastes were prepared as described below.
7. Composition A was prepared according to the invention, and comprises polydecene. Comparative Compositions B, C, and D were prepared not according to the invention, and comprise vaseline, isopropyl palmitate, and isopropyl myristate, respectively.

	Composition A (Inventive)	Composition B (Comparative)	Composition C (Comparative)	Composition D (Comparative)
Potassium persulfate	36.9 g	36.9 g	36.9 g	36.9 g
Sodium persulfate	6g	6g	6g	6g
Sodium metasilicate	3g	3g	3g	3g
Sodium disilicate	15 g	15 g	15 g	15 g
Ammonium chloride	4.2 g	4.2 g	4.2 g	4.2 g
EDTA	0.2 g	0.2 g	0.2 g	0.2 g
Polyurethane (Serad-FX 1100 sold by Condea)	2 g	2 g	2 g	2 g
Carboxymethyl potato starch	2 g	2 g	2 g	2 g
Sodium cetostearyl sulfate	1 g	1 g	1 g	1 g
Sodium lauryl sulfate	3 g	3 g	3 g	3 g
Sodium stearate	2 g	2 g	2 g	2 g
Titanium oxide	1 g	1 g	1 g	1 g
Polydecene (Nexbase 2006	22.5 g	-	-	-

FG sold by Fortum)				
Vaseline	-	22.5 g	-	-
Isopropyl palmitate	-	-	22.5 g	-
Isopropyl myristate	-	-	-	22.5 g
colloidal silica (Levillite sold by CECA)	0.5 g	0.5 g	0.5 g	0.5 g
hydrophobic fumed silica (AEROSIL R972 sold by Degussa)	0.7 g	0.7 g	0.7 g	0.7 g

**B. Measurement of Paste Firmness**

8. The firmness of these four bleaching pastes was evaluated by penetrometry after being placed in a freezer at -21°C for 16 hours.
9. Penetrometry measurements were made with a Stable Micro Systems TA.XT Plus texture analyzer fitted with a measuring head with a maximum force of 5 kg. The head was equipped with a 2-mm diameter cylindrical steel probe (reference no. SMS P/2). The probe was set to penetrate the interior of the sample at a speed of 1 mm/s over a total distance of 8 mm.
10. The surface of the samples was carefully smoothed at room temperature, and the samples were then placed in the freezer at -21°C for 16 hours.
11. The samples were then tested directly in their jars when they were removed from the freezer.
12. Such penetrometry measurement could evaluate the firmness of a paste whose consistency would make it impossible to take traditional rheological measurements based on flow or oscillation.

**C. Results**

13. The maximum force values recorded during the penetrometry measurements are presented in the table below:

Composition	Oil Component	Maximum Force (g)
A (Inventive)	Polydecene	50
B (Comparative)	Vaseline	1890
C (Comparative)	Isopropyl palmitate	> 5000*
D (Comparative)	Isopropyl myristate	> 5000*

\*instrument reaches maximum

14. It was clear that the paste formulated with polydecene remained malleable at low temperature.

15. The paste formulated with Vaseline was extremely firm (for example, it was difficult to mark it with a fingernail). The other two pastes, made with isopropyl palmitate and isopropyl myristate, respectively, were solid and brittle.

**Series 2**

**A. Preparation of the Compositions**

16. The following bleaching pastes were prepared as described below.

17. Composition E was prepared according to the invention and comprises polydecene. Comparative Compositions F and G were prepared not according to the invention and comprise vaseline and isopropyl palmitate, respectively.

Composition	Composition E (inventive)	Composition F (Comparative)	Composition G (Comparative)
Potassium persulfate	36.9 g	36.9 g	36.9
Sodium persulfate	6 g	6 g	6 g
Sodium metasilicate	3 g	3 g	3 g
Sodium disilicate	15 g	15 g	15 g
Ammonium chloride	4.2 g	4.2 g	4.2 g
EDTA	0.2 g	0.2 g	0.2 g
Polyurethane (Rheolate FX 1100 sold by Elementis)	2 g	2 g	2 g
Carboxymethyl potato starch	2 g	2 g	2 g
Sodium cetostearyl sulfate	1 g	1 g	1 g
Sodium lauryl sulfate	3 g	3 g	3 g
Sodium stearate	2 g	2 g	2 g
Titanium dioxide	1 g	1 g	1 g
Polydecene (Nexbase 2006 FG sold by Fortum)	22.5 g.	-	-
Vaseline	-	22.5 g	-
Isopropyl palmitate	-	-	22.5 g
Block copolymer (Versagel M200 sold by Penreco)	1.2 g	1.2 g	1.2 g

**B. Measurement of Paste Firmness**

18. The firmness of these three bleaching pastes was evaluated by penetrometry after being placed in a freezer at -21°C for 16 hours.

19. Penetrometry measurements were made with a Stable Micro Systems TA XT Plus texture analyzer fitted with a measuring head with a maximum force of 5 kg.

The head was equipped with a 2-mm diameter cylindrical steel probe (reference no. SMS P/2). The probe was set to penetrate the interior of the sample at a speed of 1 mm/s over a total distance of 8 mm.

20. The surface of the samples was carefully smoothed at room temperature, and the samples were then placed in the freezer at -21°C for 16 hours.
21. The samples were then tested directly in their jars when they were removed from the freezer.
22. Such penetrometry measurement could evaluate the firmness of a paste whose consistency would make it impossible to take traditional rheological measurements based on flow or oscillation.

#### C. Results

23. The maximum force values recorded during the penetrometry measurements are presented in the table below:

Composition	Oil Component	Maximum Force (g)
E (Inventive)	Polydecene	7.8
F (Comparative)	Vaseline	1210
G (Comparative)	Isopropyl palmitate	> 5000*

\* instrument reaches maximum

24. It was clear that the paste formulated with polydecene remained malleable at low temperature.
25. The paste formulated with Vaseline was extremely firm (for example, it was difficult to mark it with a fingernail). The paste made with isopropyl palmitate was solid and brittle.

26. I further declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true, and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

Dated: March 5 th, 2009

By: Florence LAURENT  
F. Laurent